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IPM Practices for Healthy Crops and Healthy Families

Ms. Harriett Muthoni joined the Nthambo farmers group after farming for at least 10 years. In her previous farming experience, she grew a mix of maize and vegetables for market and to feed her family. Farming is especially difficult in the warm and humid environment of Kenya’s forested hill country, where plant insect pests, diseases, and weeds are unrelenting. And Harriett had a problem: when she would come in the house after treating her crops with pesticides to protect them from insects and disease, she started feeling sick, and coughing, and her skin felt irritated. Even her children were affected because they were exposed by being outside when she sprayed and they would walk in or around the field even during application. Like most farmers in this area, Harriett had no training in pest and disease identification, so she did not know whether the pesticide she was using



Harriett Muthoni prepares to harvest French beans from her farm where IPM practices have allowed her to eliminate the use of synthetic pesticides.

was suitable for the particular problem in the field. And like most farmers, she relied only on synthetic pesticides to control pests and diseases. Not only did she think they were making her family sick, they were so expensive that she had little profit at the end of the season.

Harriett had joined the Nthambo group when irrigation water became available. But it was only when the group was approached by scientists at the Kenya Agricultural and Livestock Research Organization (KALRO) that they decided to learn, grow, and market as a group. Researchers from KALRO, led by Dr. Jesca Mbaka, connected the Nthambo farmers to the East Africa Vegetable Crop Integrated Pest Management Innovation Lab (IPM-IL), sponsored by the U.S. Agency for International Development (USAID) and directed by scientists at KALRO and Ohio State University. In this project, Harriett and 29 other farmers – most of them women – took part in KALRO-led IPM training. They started with pest and disease identification, and then learned different ways to manage these problems, especially methods that did not involve the use of pesticides.

Harriett stated that the IPM training was “the first time I understood anything about differences between pests and how organisms in the soils were the cause of tomato wilt.”

She quickly embraced IPM tactics, including the use of healthy tomato seedlings, resistant varieties, and *Trichoderma* for nematode control in French beans. She uses a trap for *Tuta absoluta* in her tomato field, and applies a neem-based product at the first sign of infestation. On a recent visit she showed off a tomato field and adjacent kale field. Neither had received any synthetic pesticides; the tomatoes were flowering and the kale had been harvested three times already. She said, "I used to apply a pesticide to kale and then come back a few days later and spray again, and then had to wait several days before I could sell the crop. But if I waited too long I had to go back in and spray again." Now, she said, instead of spending time spraying, she spends time at the market because she can spray a biological product one day and market it two days later. In addition to saving "a lot of money" on pesticides, she feels better; she is healthy, and she doesn't have to be afraid to feed her vegetables to her children.